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M E M O R A N D U M

TO: Bureau of Operating Permits August 1, 2006

FROM: John Jenks/Alan Dresser
Bureau of Technical Services

SUBJECT: Subchapter 22 Sources Requiring an Air Quality Impact Evaluation

The purpose of this memo is to clarify which sources undergoing Title V permitting must submit a modeling analysis and/or risk assessment and what this evaluation needs to demonstrate. This guidance applies to either a new major source requesting a Title V permit, a significant modification to an existing facility, or a minor modification to an existing facility.

Who Must Submit a Modeling Analysis and/or Risk Assessment

7:27-22.8 Air quality simulation modeling and risk assessment

(a) An applicant for an initial operating permit for a new major facility, or for a minor modification or significant modification to an existing operating permit, shall conduct air quality simulation modeling in accordance with (c) below if:

1. The application is subject to PSD air quality impact analysis requirements set forth at 40 CFR 52;

2. The application is subject to the air quality impact analysis requirements set forth at N.J.A.C. 7:27-18.4;

3. The application includes relocation of a temporary facility to a site not specifically authorized in the operating permit, and air quality simulation modeling or risk assessment was required for the location(s) authorized in the operating permit; or

4. The application includes source operations which, based on screening procedures published in technical manuals by the Department, have the potential to cause any of the adverse air quality effects listed in (b)1 through 4 below.

22.8(a) 1
A new PSD permit or a modification of an existing PSD affected source that involves a significant emissions increase.

22.8(a) 2
The permit application proposes a significant net emissions increase in its annual emissions (as defined in 7:27-18.7) that equals or exceeds the limits listed in Table 1 below. The levels in

Table 1 are based on the significant net emission increase levels defined in N.J.A.C. 7:27-18 and the PSD significant emission rates.

TABLE 1. CRITERIA POLLUTANT EMISSION INCREASES REQUIRING AN AIR QUALITY IMPACT ANALYSIS [a]

Pollutant	Emission Rate (tons per year)
Carbon monoxide	**100**
Nitrogen oxides (NOx)	**25[b]/40[c]**
Sulfur dioxide	**40**
PM-10/PM-2.5	**15**
Lead	**0.6**

a. Other situations may require an air quality impact analysis, ex. stack height decrease.
b. Applies if the stack or release height of the source is less than 55 ft.
c. Applies if the stack or release height of the source is equal to or greater than 55 ft.

22.8(a) 4
Facilities listing hazardous air pollutant (HAP) emissions which are listed in the *NJDEP Division of Air Quality Risk Screening Worksheet for Long-Term Carcinogenic and Noncarcinogenic Effects and Short-Term Effects*, and fail the level 1 risk screening. Worksheet available at http://www.state.nj.us/dep/aqpp/risk.html

What Does the Modeling Need to Determine
Per 7:27-22.8(b), the air quality simulation modeling shall be used to determine whether the potential to emit proposed in the permit application may cause:

- Possible violations of a New Jersey Ambient Air Quality Standard (NJAAQS) or National Ambient Air Quality Standard (NAAQS),
- Possible exceedance of a Prevention of Significant Deterioration (PSD) increment,
- An increase in the ambient air concentration that equals or exceeds the significant air impact levels (Table 1 of N.J.A.C. 7:27-18.4(a)) in a nonattainment area,
- The occurrence of "air pollution" as defined in Subchapter 5. This is considered to be an unacceptable cancer risk or hazard index.

"Air pollution" means the presence in the outdoor atmosphere of substances in quantities which are injurious to human, plant or animal life or to property or unreasonably interfere with the comfortable enjoyment of life and property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.